

CASE REPORT

APICAL TUBERCULOSIS PRESENTING AS PANCOAST TUMOR

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HOW TO CITE THIS ARTICLE:

J. V. Praveen, V. V. Ramana Reddy, D. S. Sowjanya, B. K. Prithvi, G. Ramya. "Apical Tuberculosis Presenting as Pancoast Tumor". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 27, July 07; Page: 7438-7440, DOI: 10.14260/jemds/2014/2916

ABSTRACT: A 73-year-old woman presented with pain in her right shoulder radiating to the right scapula and a tingling sensation of the right arm with involvement of the fourth and fifth finger. Chest x ray showed a well-defined mass in right apical area of lung. HRCT chest showed a well-defined mass in right upper zone in apex destroying the upper 2 ribs. Clinically the diagnosis of Pancoast tumor of the right lung was made. Computed tomographic guided fine needle aspiration cytology was done and it was inconclusive. So gun biopsy was done under ultrasound guidance. The histologic and microbiologic examinations established the diagnosis of tuberculosis (TB).

KEYWORDS: Apical Tuberculosis, Pancoast tumor.

INTRODUCTION: Superior Pulmonary Sulcus or Pancoast tumor was first described by Pancoast in the US and Tobias in Argentina in 1932.¹ Being located at the dorsal aspect of the thoracic inlet and apex of the chest, Pancoast tumor is mostly derived from neoplasms in 95% of patients and characterized by shoulder pain due to involvement of brachial plexus nerves, Horner's syndrome and atrophy of hand muscles.^{1,2} Furthermore, first to third upper ribs are commonly destroyed by the tumor. Pulmonary infectious diseases rarely cause Pancoast-Tobias syndrome and only a few cases have been reported in the literature.³ Delayed occurrence of squamous cell carcinoma on remaining sequel of pulmonary tuberculosis has not been reported in the literature. Tuberculosis seems to be presenting with more unusual clinical and radiological manifestations.

CASE REPORT: A 73-year-old woman presented to our outpatient department with progressive pain in her right shoulder radiating to the right scapular region. She was also complaining of paresthesia of the right upper arm with involvement of the fourth and the fifth finger. Patient was having loss of weight, loss of appetite, and was not able to move out of the bed.

She did not have alcohol or nicotine abuse. General and local examinations revealed that sensations over the fourth and fifth finger of the right hand were decreased. There were no signs of Horner's syndrome. Laboratory investigations showed no abnormal results, but a tuberculin test was strongly positive (28mm), ESR was 52 mm. A chest roentgenogram was performed that showed a homogenous opacity at the apex of the right lung with nodular opacities in both lungs (figure 1). Three times sputum analysis and examinations were negative for tuberculosis.

Thoracic computed tomographic scan confirmed the presence of mass measuring 4.8 X 3.9 X 4.1 cm in apical and posterior segment of right upper lobe (figure 2, 3). Bony destruction of posterior portion of 3rd rib and adjacent transverse process, there was mild extension of mass lesion into adjacent soft tissues posterolateral to ribcage. Soft tissue extension measured 2.7 X 2.6 cm. No clear planes of cleavage were visible between mass and adjacent pleura. Multiple well defined reticulonodular lesions diffusely involving both lungs were noted.

The diagnosis of an upper sulcus tumor (Pancoast tumor) was made. A computer tomographic guided FNAC showed no evidence of malignant cells.

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Figure 1

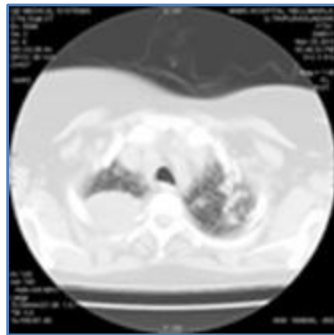


Figure 2

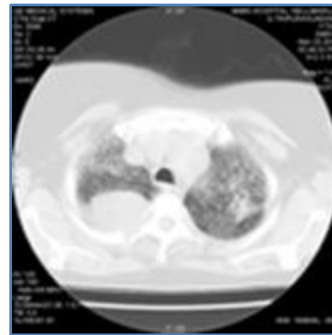


Figure 3

Ultrasound guided gun biopsy was done. On taking biopsies for frozen section and microbiologic examination, whitish creamy caseating materials were evacuated from the lesion. All biopsies showed no malignant cells, but granulomatous tissue with chronic inflammatory and epithelioid cells as well as Langhans giant cells were present.

The patient was given antituberculous chemotherapy medications, consisting of a combination of Rifampicin [450 mg/d]; isoniazid 600mg/day, Pyrazinamide (1500mg/day), ethambutol 1200 mg/day for 6 months. Patient improved symptomatically after taking anti-tuberculosis medicines. Her appetite improved, fever decreased and she was able to walk and do her daily activities. Chest x ray showed improvement and resolution in the size of the lesion (figure 4).



Figure 4

DISCUSSION: Pancoast syndrome arises in nearly all cases of malignant tumors, mainly superior sulcus tumors (Pancoast tumors), which represents a subset of bronchial carcinomas that occur in

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the apex of the lung and frequently invade the first two or three ribs, the nearby vertebral bodies, the lower part of the brachial plexus, the subclavian vessels, and the stellate ganglion. However, infection as a cause for Pancoast syndrome is extremely rare.³

These tumors present by radiography as small homogeneous shadows of the extreme apex with local rib destruction and vertebral infiltration.⁵

The presentation of tuberculosis seems to be changing to a more unusual clinical and radiographic finding. Therefore, determining the diagnosis of tuberculosis is often difficult. This case report demonstrates that tuberculosis should be kept in mind as a differential diagnosis of thoracic lesions and those malignant tumors always have to be confirmed by histologic examination. Especially when gun biopsy is more useful rather than FNAC in these unusual presentations, clinicians should not hesitate to go ahead with gun biopsies.

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Date of Submission: 17/06/2014.

Date of Peer Review: 18/06/2014.

Date of Acceptance: 27/06/2014.

Date of Publishing: 03/07/2014.